

SAFETY ALERT

Recently the Army experienced a tragic accident involving the M121, 120mm mortar system. While conducting live-fire gunnery the crew of the M1064A3 mortar carrier experienced a misfire, and during the process of extracting the round, an in-bore detonation occurred. Three soldiers died and one soldier received minor injuries. While there are numerous factors involved in this accident, the following information requires immediate attention.

The misfire procedures for the 120mm mortar system differ between TM 9-1015-250-10 and FM 23-90 (Mortar). Crews must use the procedures as outlined in Safety of Use Message (SOU) TACOM Control number, SOUM-02-004. The initial safety investigation revealed that critical steps of the misfire procedures were not followed or enforced to include: ensuring the weapon is fully locked in the SAFE position, and giving special attention to ensuring the Blast Attenuator Device (BAD) is removed and the artillery cleaning staff used for extracting the rod is fully extended and locked. Leaders must ensure that crews follow the exact sequence of these procedures; any deviation from the required steps can result in loss of life.

The safety mechanism on the M121, and M120, 120mm mortar is unlike other safety switches in the Army. With the safety switches on these weapons, the selector lever is moved **away** from the desired function (letter **F** for Fire, or letter **S** for safe). Because of this, the switch will reveal **S** if the weapon is on Safe, or **F** if set to Fire, and will fully cover up the function **not** desired. During the investigation, it was also revealed that the firing pin can still be exposed above the cannon base if the switch is in any other position except the fully locked Safe position. Because of this, the weapon must be considered armed even when the switch is not fully locked in the fire position. Crews **must** ensure the switch is **FULLY** locked into either the Fire or Safe position depending on the mode of operations.

Additional factors revealed that crew drills using the 120mm mortar inert training round, (nomenclature "Battalion Training Aid", NSN 6920-01-383-2939, found in appendix C of TM 9-10150250-10, additional authorization list) is required for misfire procedures training. Soldiers must conduct this training using the inert round in order for them to fully master the task of extracting a round. Simulation or talking through the sequence of misfire procedures is not adequate.

Leaders must ensure crewmembers are cross-trained and can demonstrate through practical exercise each step required during the misfire procedure. Then, leaders at all levels must enforce those standards and not allow either short cuts or deviation from procedural sequencing.

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Recently, the Army lost two soldiers and injured 13 others in a tragic 105 mm artillery accident. While conducting a calibration mission, the artillery unit did not follow established firing procedures when conducting live fire. As a result, a round impacted 930 meters short of its intended target. While there are numerous factors involved in this accident, the following information requires immediate attention.

Reference MILPER message 01-163, the MOS conversion of 13C and 13E into 13D is based upon the final fielding of AFATDS. Commanders must be aware that 13D MOS training has not yet been incorporated into the schoolhouse POI. Currently, AFATDS New Equipment Training (NET) and unit level manual gunnery training is the only training available for this conversion process from 13C/E to 13D. Commanders must be aware that while manual gunnery training and AFATDS NET can teach a 13C the mechanics behind manual gunnery, it may be inadequate to qualify a 13C to fulfill traditional 13E FDC NCOIC responsibilities at battery level.

Commanders should carefully consider the level of training and qualification of 13C personnel recently reclassified to 13D before certification and qualification in a battery level Fire Direction Center. Concurrently with the MOS reclassification, selected artillery units are undergoing fielding of the Advanced Field Artillery Tactical Data System (AFATDS), version 99.Oscar. A limited safety release message on AFATDS states that units must adhere to all standard policies and procedures for live-fire to include verifying all data put into AFATDS via another approved method (Battery Computer System and/or manual computations). Commanders must be aware that AFATDS V99.Oscar has a built-in default of zero altitude if target altitude is not entered. A CECOM Safety Alert, and Amendment 1 to Safety Confirmation for the non-First Digitized Division (non-FDD) Advanced Field Artillery Tactical Data System 99 (AFATDS 99), published by the U.S. Army Developmental Test Command (DTC), dated 10 April 2002, provides a warning to operators of this software behavior shortfall. Until this is corrected in AFATDS (V99.T and subsequent), Commanders must ensure that ballistic solutions obtained via AFATDS are appropriately verified by other approved methods.

Commanders must thoroughly assess all missions and use all information available to them as part of their risk management process. Ensure all assigned soldiers are trained, certified and supervised to standard both individually and collectively. There is no substitute for proper leader supervision, continuous and ongoing risk management and on-the-spot corrections.



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